

Borough of Lancaster.

Annual and Quarterly Reports

OF THE

MEDICAL OFFICER OF HEALTH

AND

INSPECTOR OF NUISANCES,

FOR THE

Borough and Port of Lancaster,

FOR THE YEAR 1897.

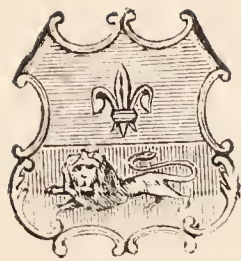
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Borough of Lancaster.

Annual Report of the Medical Officer of Health.

To the Urban Sanitary Authority for the Borough of Lancaster.

MR. MAYOR, MR. CHAIRMAN, AND GENTLEMEN,

I have this year the honour to present to you my 12th Annual Report upon the health and sanitary condition of the Borough of Lancaster.

During this time the population has increased from 23,510 to 38,228—a gain of 14,178 for the 12 years, or at the rate of 1,226 per annum.

During this same period the rateable value has risen from £92,851 in 1886 to £147,804 in 1897.

The area of the town covers 1,680 acres, and its estimated population of 38,228 gives a rate of 22.75 persons to each acre.

This density of population has a very important bearing on the death-rate, the mere fact of the high density increasing the sick and death-rates.

The evil effect of having too many fowls or animals on a given space is well known to almost everyone, but few think of the evil effect of the same treatment on human beings.

POPULATION.

The total population of Lancaster, including the six principal institutions, is estimated at the middle of 1897 to be 38,228, and the population, exclusive of these six institutions, at the same period, is calculated to be 35,346.

These six institutions with their respective populations are as follows :—

The County Asylum.....	1980
The Royal Infirmary	30
The Union Workhouse	193
The Bowerham Barracks	297
The Castle.....	61
The Ripley Hospital	321
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	2882

DEATH RATE.

The total number of deaths registered in the town during 1897 was 726, equal to a gross annual death-rate of 18·99 per 1,000 of population. Of these, 381 were those of males and 345 were those of females.

In the year 1896 the gross number of deaths in the town was 729, equal to an annual death-rate of 19·68 per 1,000 of population. Of these deaths, 388 were those of males and 341 those of females.

The number of deaths occurring in the town during 1897, excluding those in the six principal institutions, was 492, equal to an annual corrected death-rate of 13·91 per 1,000 of population.

The deaths of persons during 1896 in the same restricted area were 479, equal to an annual corrected death-rate of 14·02 per 1,000 of population.

Of the 492 deaths occurring in the town, 262 were those of males and 230 those of females. 145 occurred in infants under 1 year, 92 in children over 1 and under 5 years, 165 in persons over 5 and under 65 years, and 90 in persons over 65 years of age.

The deaths of children under 1 year old numbered 145, equal to an annual infantile death-rate of 151 per 1,000 registered births.

This is a decrease of 7 on the corresponding number of deaths occurring during 1896, the number registered in that year being 152, equal to an annual infantile death-rate of 163 per 1,000 registered births.

The deaths of children over 1 and under 5 years numbered 92, an increase of 44 over the number registered in 1896, which was 48.

The deaths of children over 1 and under 5 years have thus almost doubled, and the two ages periods taken together, that is to say, the deaths of children under 5 years has increased by 37 above the number recorded for 1896.

The deaths of persons over 5 and under 15 years are 16 in number, exactly the same as in 1896.

The deaths of persons over 15 and under 25 years amount to 17, being 4 less than in 1896.

The deaths of persons over 25 years and under 65 years are 132 in number, 11 less than in 1896.

The deaths of persons over 65 years are 90, making 9 less than in 1896.

Below I give the results for the past eight years in tabular form :—

DEATHS.	1890	1891	1892	1893	1894	1895	1896	1897
Under 1 year	154	153	150	165	112	138	152	145
Over 1 and under 5	77	78	92	100	40	65	48	92
Over 5 and under 15	23	30	21	16	16	14	16	16
Over 15 and under 25.....	27	22	20	23	17	27	21	17
Over 25 and under 65.....	124	131	127	100	125	156	143	132
Over 65	127	139	120	124	103	116	99	90
Total deaths—all ages	532	553	530	528	413	516	479	492

During 1897 the following deaths have occurred in the six principal institutions :—

The County Asylum	147
The Royal Infirmary	36
The Union Workhouse	46
The Bowerham Barracks	0
The Castle	2
The Ripley Hospital	3
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	234

During 1896 the deaths in these institutions were as follows :—

The County Asylum	180
The Royal Infirmary	39
The Union Workhouse	25
The Bowerham Barracks	4
The Castle	2
The Ripley Hospital	0
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	250

showing a decrease of 16 during the year 1897.

Below I give for comparison the gross and corrected death-rates for the last ten years, which I am glad to say show a satisfactory decrease :—

Year.	Gross Death-rate.	Corrected Death-rate.
1888	22.98	17.32
1889	24.90	19.62
1890	24.30	19.33
1891	23.73	19.52
1892	23.32	17.95
1893	22.55	17.23
1894	17.84	13.00
1895	20.93	15.66
1896	19.68	14.02
1897	18.99	13.91
Average	21.92	16.75

ZYMOTIC DEATHS.

Deaths from the seven principal zymotic diseases have in 1897 risen to the large number of 109, a figure which has not been approached in recent years. They were as follows :—

Measles	55
Diarrhœa	32
Enteric Fever	16
Scarlet Fever	2
Whooping Cough	2
Diphtheria	1
Puerperal Fever	1
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	109

—equal to an annual zymotic death-rate of 2·85 per 1,000 of population.

Seven of these deaths occurred in the Institutions of the town, leaving 102 as having occurred in the town proper.

Last year these deaths numbered 47, and were as follows :—

Small Pox..	1
Enteric Fever	11
Diarrhœa	11
Diphtheria	3
Measles	2
Whooping Cough	19
	<hr/>
	47

—equal to an annual zymotic death-rate of 1·37 per 1,000 of population.

Below is shown the numbers of zymotic deaths, other deaths, and total deaths for the past 11 years :—

	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897
Zymotic Deaths	54	40	123	50	48	82	87	27	43	47	109
Other Deaths	399	562	622	692	693	674	669	591	707	682	617
TOTAL DEATHS.....	453	602	745	742	741	756	756	618	750	729	726

These zymotic deaths are all more or less preventible ones, so I think it advantageous to give you the death-rate as it would have been if these 109 deaths had not occurred. As I have shown in a previous paragraph, the gross death-rate for 1897 is 18·99 per 1,000 of population, and the zymotic death-rate is 2·85; therefore, if these zymotic deaths had not occurred, the gross death-rate would have been 16·14, and similarly the corrected death-rate, which is 13·91, would have been 11·06.

For the last two years I have shown the percentage of the deaths of children under 5 years to the births, which represents the death-rate calculated in a manner supposed by some Authorities to more nearly approach the truth than when obtained in the usual way.

Below are the figures for the last 4 years :—

	1894	1895	1896	1897
Deaths under 5 years.....	152	203	200	237
Births	1008	936	938	957
Percentage of Deaths under 5 } years to births.....)	15·07	21·68	21·36	24·76
Population	31,759	32,948	34,147	35,346
Total Deaths	413	516	479	492
Death Rate calculated in usual } manner.....)	13·00	15·66	14·02	13·91

As I remarked last year, we may learn, from the consideration of these figures, why the death-rate of Lancaster is not as low as we desire. We may also learn in what direction our efforts to reduce the death-rate should be made. I have myself no doubt whatever that the

deaths of children under 5 years of age are far higher than they ought to be, and these deaths are caused principally by three factors—fever, diarrhœa, and catarrhal affections of the lungs and air passages. The deaths of children under 5 years in 1897 were 237, that is, nearly half the total deaths.

Of these deaths, 53 were caused by measles, 31 by diarrhœa, 30 by respiratory diseases, 2 by scarlet fever, 2 by whooping cough, and 1 by diphtheria—a total of 119 due to preventible disease. The deaths from catarrhal affections of the lungs and air passages, when not due to previous attacks of zymotic disease, are in large part caused by the ignorant and careless treatment of children by their parents. How often when out after dark do we meet persons returning home with young children—children in arms, children in perambulators, and others who are old enough to walk; tearful, tired-out children whose “outing” is so often followed during the succeeding days by bronchitis and other catarrhal affections.

Parents seem to forget that the very fact of these children being fatigued makes them more susceptible to disease. This is only one of the ways these diseases are brought on. Want of sufficient clothing and food, due to one or both parents—generally the male—consuming all he can earn, and sometimes more, in drink.

Then again, take the case of febrile diseases and diarrhœa, which have last year directly caused 89 deaths of children under 5 years.

The bacilli of these diseases probably all grow in the sewage polluted subsoil which covers the ground in the neighbourhood of some dwellings. This is certainly the case with the bacilli of enteric fever and diarrhœa, and is probably also the case with scarlet fever, diphtheria, and whooping cough.

I have very little doubt that improvement will take place when the yards and courts are all flagged, as then they can be more easily cleansed; but even then the polluted earth will be left beneath the flags. The work of covering these courts and yards with concrete or flag has been going steadily on for some years, and it is of great importance that no unnecessary delay should occur in the execution of this work.

I here give a list of the yards and courts recommended to be paved, flagged, or concreted by the Committee when they inspected portions of the town in the year 1889, shewing which still require attention :—

Yard	Behind Russell Street	Done
Yard	64 to 72, King Street	
Wood Yard	King Street	
Canvas Court	Henry Street	Done
Yard	104 to 110, Penny Street	
Yard	103, Penny Street	
Four Yards	Upper side, Back Marton Street	
Yard	100, Penny Street	
Happold's Yard	Penny Street	Done
Wise's Court	Mary Street	Done
Beeley's Yard	Cheapside	
Two Cottages	Hargreave's Yard, Little John Street	
Ellithorne's Yard	St. Leonardgate	Done
Lodge Place	St. Leonardgate	Done
East Court	St. Leonardgate	
Richmond's Yard	Germany Street	
Barlow's Yard	Germany Street	Done
Yard	28 to 36, Main Street	Done
Church Court	Main Street	Done
School Court	Main Street	Done
Yard	5 to 11, Cross Street	Done
Back Captain's Row	Butts Lane	Done
Yard	St. Leonardgate	
Lamb's Yard	Henry Street	Done
Spinners' Arms Yard	Henry Street	Done
Graham's Yard	North Road	
Moss' Yard	North Road	
Yard	8 to 10, Chapel Street	
Walkden's Yard	Bridge Lane	Done
Moon's Yard	Bridge Lane	
Harrison's Yard	Bridge Lane	Done

Black's Yard	China Lane	Cleared away
Yard and Passage	Behind Station Inn, Nile Street	Done
Yard	Anchor Lane (bottom)	
Lawson's Yard	Back Queen Street	In hand
Two Courts	Back Marton Street	Done
Bailey's Court	Mary Street	Done
Oddfellows' Hall	Mary Street	In hand
Tomlinson's Yard	Church Street	Done
Brough Court	St. Leonardgate	Done
	Back Pitt Street	
Braithwaite's Court	Nelson Street	
Foster's Court	St. Leonardgate	Done
	Russell Street	Done
Yard	Behind Foundry, Germany Street	
Wearing's Yard	Common Garden Street	Done
Gorrill's Yard	Mary Street	Done
Taylor's Yard	Brewery Lane	
Alderson's Yard	Main Street	Done
Blue Anchor Lane	Main Street	Done
Lodging-house Yard	Main Street	Done
Snape's Yard	Main Street	
Butts Lane	Heysham Road	Done
White's Yard	North Road	
Capstick's Yard	Henry Street	Done
Haworth's Yard	Penny Street	Done
Swan Court	St. Leonardgate	Done

SMALLPOX.

Happily during the year 1897 there has been no visitation of smallpox to this sanitary district. Since the year 1888 smallpox has been introduced into the town no less than eleven times—three times in 1888, twice in 1892, three times in 1893, once in 1894, and twice in 1896. On each occasion I am glad to say notification was received at an early stage of the disease, and prompt isolation ensued. In 1895, owing to the fact that railway wagon building is carried on here, a connection was established with Gloucester, where similar works exist. Smallpox was

introduced into the town by a Lancaster workman returning home from that place. In a similar manner the works at the Midland Railway and Docks at Heysham by attracting to our neighbourhood great numbers of labourers may possibly infest us by bringing men from the north-east coast, where, at Middlesborough, the disease extensively prevails. That this is no impossible event may be inferred from the fact that there has lately been in Lancaster a man from Durham, who had come to Heysham in search of work.

It is intended to build a small stone hospital, capable of extension, for the reception of smallpox, but owing to various causes (one of which is the uncertainty which prevails as to the intentions of the County Council in this matter) the building has not yet been commenced, although the plans have been ready for some time.

I am happy to note that, although this is the case, we yet have the provision which was made for the last attack, namely, three wooden huts in position, capable of accommodating from 8 to 10 patients, a large double hospital tent, which would hold 4 to 6 more, and a new wooden hut, which could be erected on the spot if required, and would accommodate 4 more, say in all 16 to 20 beds.

The Vaccination Returns for the town are again of a very favourable character, few children being unaccounted for. Of course this return takes no account of the character of the vaccination, it only proves that some degree of vaccination has been successfully performed.

ENTERIC FEVER.

This disease, although not so prevalent as in 1896, has unfortunately been much more fatal. I have received notice of 55 attacks of the disease, leading to 16 deaths—equal to a case mortality of 29·09 percentage of attacks, an enteric fever death-rate of ·41 per 1,000 of population, and an attack rate of 1·43 per 1,000 of population. Last year 64 cases were notified with 11 deaths, and a case mortality of 17·18 percentage of attacks, with an enteric fever death-rate of ·29, and an attack-rate of 1·72 per 1,000 of population.

Of these 55 cases, 23 were treated in the Sanatorium with 5 deaths, and the remaining 32 at their own homes with 11 deaths.

The time of year when these deaths occurred is shewn below in tabular form for the last 5 years :—

	1893	1894	1895	1896	1897	Totls
January	2	3	6	4	7	22
February	1	2	5	11	0	19
March	3	3	1	14	8	29
April	3	1	1	9	2	16
May	3	8	0	6	4	21
June	2	3	1	7	1	14
July.....	1	3	4	4	0	12
August	4	6	3	2	5	20
September.....	7	3	1	1	11	23
October	3	7	2	5	10	27
November	8	2	3	0	3	16
December	2	6	1	1	4	14
Totals.....	39	47	28	64	55	233

Whereas in 1896 the greatest number of attacks occurred in the spring months, February and March, in 1897 the months of greatest incidence were September and October. Another fact which one may see from the above table is that in all the five years there are only four months in which no cases of enteric fever have been notified.

In order that these facts may be more easily grasped, I have arranged them in tabular form for the last ten years :—

Year.	Population.	Notified Cases.	Attacks per 1,000 of population.	Deaths.	Case mortality.	Deaths per 1,000 of population.
1888	26189	34	1·29	2	5·88	·07
1889	29876	18	·60	2	11·11	·06
1890	30444	44	1·44	7	15·90	·23
1891	31034	53	1·70	9	16·98	·29
1892	32417	40	1·23	7	17·5	·21
1893	33524	39	1·16	3	7·69	·08
1894	34631	47	1·35	2	4·25	·05
1895	35130	28	·78	4	14·28	·11
1896	37029	64	1·72	11	17·18	·29
1897	38228	55	1·43	16	29·09	·41

To show how generally these attacks have been distributed throughout the town, I here give you the list of cases, with the dates of receipt of notification, sex and age of patient, and remarks on the sanitary state of the dwelling :—

CASE.	SEX.	AGE.	DATE.	REMARKS.
1	... F	... 11 yrs.	... Jan. 4	... Back Yard fairly clean; cobble paved.
2	... M	... 24 yrs.	... Jan. 4	... Back Yard in bad state; close and confined.
3	... F	... 26 yrs.	... Jan. 7	... Recently confined; back yard cobble paved.

- 4 ... M Jan. 8 ... Been working at a defective w.c.;
back yard good.
- 5 ... F ... 8 yrs. ... Jan. 8 ... Good house; no apparent sanitary
defects.
- 6 ... F ... 13 yrs. ... Jan. 12 ... Imported from Wigan; old house;
damp at back.
- 7 ... M ... 40 yrs. ... Jan. 18 ... House in good order.
- 8 ... F ... 25 yrs. ... Mar. 1 ...
- 9 ... F ... 34 yrs. ... Mar. 1 ...
- 10 ... M ... 17 yrs. ... Mar. 13 ... Drain defective; house otherwise
good.
- 11 ... F ... 31 yrs. ... Mar. 15 ...
- 12 ... M ... 28 yrs. ... Mar. 18 ...
- 13 ... M ... 38 yrs. ... Mar. 18 ...
- 14 ... M ... 36 yrs. ... Mar. 20 ...
- 15 ... M ... 17 yrs. ... Mar. 20 ...
- 16 ... M ... 22 yrs. ... April 12 ... A repairer of drains; situation of
house low; general sanitary
surroundings inferior.
- 17 ... M ... 16 yrs. ... April 26 ... Untrapped drain in cellar; house
deficient in air and ventilation.
- 18 ... F ... 15 yrs. ... May 2 ... Sewer at back formerly blocked;
cellar damp; yard cobblepaved.
- 19 ... F ... 16 yrs. ... May 5 ... Good house; sanitation excellent.
- 20 ... F ... 27 yrs. ... May 12 ... Situation low; general sanitary
surroundings inferior; some
connection with cases in Rural
Sanitary District.
- 21 ... M ... 5 yrs. ... May 24 ...
- 22 ... M ... 47 yrs. ... June 5 ... Back yard unpaved.
- 23 ... M ... 23 yrs. ... Aug. 3 ... Had been working away from Lan-
caster.
- 24 ... M ... 14 yrs. ... Aug. 9 ... A doubtful case; house in good
sanitary condition.
- 25 ... F ... 17 yrs. ... Aug. 18 ... Defective drain.
- 26 ... M ... 21 yrs. ... Aug. 20 ... Imported from Liverpool.
- 27 ... M ... 26 yrs. ... Aug. 30 ... W.C.'s never right long together;
sanitary condition defective.
- 28 ... M ... 11 yrs. ... Sept. 1 ... Drain always troublesome; good
house.

- 29 ... M ... 25 yrs. ... Sept. 1 ... Good house; no discoverable sanitary defect.
- 30 ... F ... 18 yrs. ... Sept. 2 ... Good house; no discoverable sanitary defect.
- 31 ... M ... 25 yrs. ... Sept. 9 ... Brother of case 20.
- 32 ... M ... 12 yrs. ... Sept. 16 ... Back yard in bad condition.
- 33 ... F ... 24 yrs. ... Sept. 22 ... Back yard in bad condition.
- 34 ... M ... 10 yrs. ... Sept. 25 ... Cobble paved yard.
- 35 ... M ... 10 yrs. ... Sept. 27 ... Yard cobble paved; back premises in a fair sanitary condition.
- 36 ... M ... 48 yrs. ... Sept. 30 ... Sanitary condition poor; house dirty; new street not yet paved; water frequently standing in street.
- 37 ... F ... 8 yrs. ... Sept. 30 ...
- 38 ... M ... 24 yrs. ... Sept. 30 ... Sewer almost level; situation low-lying; delapidated property in rear.
- 39 ... F ... 29 yrs. ... Oct. 9 ... See case 34.
- 40 ... M ... 48 yrs. ... Oct. 14 ... Imported from Ellel.
- 41 ... F ... 14 yrs. ... Oct. 18 ... See case 36.
- 42 ... F ... 16 yrs. ... Oct. 18 ... See case 29.
- 43 ... M ... 29 yrs. ... Oct. 20 ... Sewer has been blocked.
- 44 ... F ... 6 yrs. ... Oct. 23 ... See case 39; same family changed their residence.
- 45 ... M ... 12 yrs. ... Oct. 23 ... Cobble paved yard; surroundings far from clean.
- 46 ... M ... 32 yrs. ... Oct. 25 ... Good yard; house clean; street dirty.
- 47 ... M ... 30 yrs. ... Oct. 25 ... Deficient ventilation; no back to house.
- 48 ... M ... 16 yrs. ... Oct. 27 ... Brother of case 43.
- 49 ... F ... 29 yrs. ... Nov. 15 ... No yard to house.
- 50 ... F ... 31 yrs. ... Nov. 24 ... Said to suffer from phthisis.
- 51 ... F ... 9 yrs. ... Nov. 26 ... Cobble paved yard.
- 52 ... M ... 6 yrs. ... Dec. 1 ...
- 53 ... F ... 16 yrs. ... Dec. 17 ... Bad drainage at shop.
- 54 ... F ... 65 yrs. ... Dec. 20 ... Doubtful case.
- 55 ... F ... 3 yrs. ... Dec. 28 ...

The streets in which these attacks have occurred are most varied :—Monmouth Street, Lune Street, Sunnyside Lane, Cable Street, Clarence Street, Laurel Bank, Germany Street, Edward Street, Norfolk Street, De Vitre Street, Prospect Street, Chapel Street, Penny Street Windy Hill, Regent Street, Lune Square, Windermere Road, County Asylum, Rydal Road, Nile Street, Bulk Street, St. Leonardgate and Courts, Brewery Lane, Pitt Street, St. Oswald Street, King Street, Melbourne Road, Stirling Road, Bath Street, Pickard Street, St. Mary's Parade, Riverside, Ulleswater Road, Golgotha Road, Borrowdale Road, Portland Street, and Victoria Yard.

Having presented to your notice the numbers and incidence of the attacks of this disease, it becomes my duty to say something with regard to its causation, and the best means of checking its ravages.

In contradistinction to the epidemics at Maidstone and King's Lynn, enteric fever has in Lancaster assumed a more endemic character. This is shown by the preceding table, which gives the localities from which the cases were notified. One is thus led to suspect a more or less separate origin for each case of the disease, and to free from suspicion such usual sources as the milk and water supplies. It is a well known fact that the bacillus of this disease needs, for its growth, warmth, damp, a certain absence of light, and a sewage polluted medium in which to multiply. Such a combination of conditions is to be found in the humus which encircles the inside of drains and sewers, and the soil of back yards, courts, and alleys; and it is to this source that I attribute the attacks of enteric fever which we have had in Lancaster during the past year.

It is asserted on the authority of Professor Delepiné, of Manchester, and Dr. Crocker that this bacillus has been found in considerable number in the earth found between the bricks of wet (? damp) ashpits.

As I observed last year, the water supply is thoroughly good, and is above suspicion.

The milk supply is, as usual in towns of the size and character of Lancaster, brought into town by the farmers of the neighbouring

country. There are, therefore, a large number of separate supplies, and as the supply for almost each infected house is different from the others, it is extremely improbable that the disease was imported into the town by the agency of the milk supply. At the same time I may say that these farms from which the milk comes are generally in an extremely unsatisfactory sanitary condition.

The method by which I propose to meet this complaint in future is whenever a case is notified to have the yard and the cellar of the house well soaked with a disinfectant fluid, and afterwards sprinkled freely with a disinfectant powder, the drains to be flushed with a similar fluid; the disinfectant chosen to be one which has been found lethal to the enteric fever bacillus. I think it is doubtful if sufficient care has been bestowed in selecting a disinfectant suitable for these cases.

The bedding which has been used by the patient should also be put through the disinfector, and the water-closet should be washed out with the selected disinfectant solution. The great drawback to this plan is the usual deadly character of the most reliable disinfectants.

Next, with regard to the polluted ground, I think the flagging or cementing of the yards scheduled by the special Sanitary Committee of 1889 should be finished as quickly as possible. No doubt, great good would in time come from the provision of a far larger number of urinals than at present, the reason for which must be obvious to all.

In Lancaster we have for many years been substituting water closets for privies, and I think that we have caused nearly the whole of them to be converted.

In order to carry out this special attention of enteric fever cases, and also, as I show later on, in diseases of a similar class, such as diarrhoea, some assistance should be given to the Sanitary Inspector.

SCARLET FEVER.

Again, I am able to put on record, a further decrease in the number of notified cases of this disease; only 11 having been reported in 1897, as against 32 in 1896, and 62 in 1895.

Of these 11 cases, 10 occurred in the town, and 1 in the County Asylum. The disease proved fatal in two instances—equal to a scarlatinal death-rate of $\cdot 05$ per 1,000 of population, and a case-mortality of 18·18 per centage of attacks.

PUERPERAL FEVER.

Only one case of this disease came to my knowledge last year, and I only learnt of it from the death returns—no notification of it having been received.

As I mentioned in my Report of last year, a more successful method of treating these cases has been discovered, and there is every hope of the heavy case-mortality of this disease being permanently reduced.

MEASLES.

This troublesome disease has again been epidemic in the town, 1,228 cases having been reported to me in 1897.

1,196 of these cases occurred in the town, 18 in the Workhouse, 13 in Bowerham Barracks, and 1 in the County Asylum.

Of these 1,228 cases, the disease proved fatal in 55 instances—equal to a case-mortality of 4·47 per centage of attacks, and a death-rate from this cause of 1·43 per 1,000 of population. During the 5 years 1891 to 1895, the death-rate of England and Wales from this cause was $\cdot 41$ per thousand of population.

In 1896 the case mortality was 3·44 per centage of 58 cases.

The course of procedure of the Sanitary Inspector was as follows:—

- (1) Upon receipt of notification the case was visited immediately, or as soon as possible, according to the number of notifications received.
- (2) A card of instructions was given to the person in charge of the case—usually the householder.
- (3) A supply of disinfectants was given, with verbal instructions as to their use.

- (4) The children living in the house were forbidden to attend day school or Sunday school.
- (5) Notice was sent to the day school and Sunday school that the house was infected with measles, and that the children had been forbidden to attend.
- (6) The Libraries were notified that no books should be issued to these houses on account of their being infected.
- (7) Notice was also sent to the Libraries when the infection was at an end.

Arrangements had previously been made with the School Attendance Officer that he would notify the Sanitary Inspector when it was suspected that a child's absence from school was due to infectious disease, and which was accordingly done.

In my Report for last year (1896) I mentioned six matters which should have consideration in dealing with an outbreak of measles:—

- (1) Notification of the disease.
- (2) Isolation of the patient.
- (3) Attention to the sick room.
- (4) Disinfection of all articles of clothing, &c., which have been in contact with the sick person.
- (5) Prevention of children from infected homes communicating the disease to the healthy.
- (6) The closure of schools.

All these matters, except the disinfection of the clothing and bedding, were attended to in the recent epidemic, but apparently not in a sufficiently thorough manner.

This epidemic commenced at the beginning of December, 1896, and, before January 1st, 1897, 20 cases were notified, making for the total epidemic 1,248 cases, with 56 deaths.

Towards the close of July, 1897, Dr. Theodore Thomson, on behalf of the Local Government Board, visited Lancaster to enquire into the epidemic of measles, which had been raging in the Borough. A not too flattering report has just been issued which, although received

in 1898, it is I think better to consider now, rather than to defer any remarks until 1899, when probably all interest in the matter for the general public will have disappeared. It must not be overlooked that this Report, though may be in some places unpleasantly frank, is intended to show up our shortcomings, and to urge the necessity of bringing the methods employed in our town more into accordance with the teachings of modern Sanitary Science, and, in my opinion, is well worthy of the most careful study and attention of all who have the well-being of our Borough at heart.

I propose to touch upon such points as are not favourable to us so that we may derive as much profit as possible from the Report.

The first matter to which attention should be directed is the description of the houses of the older portion of the town as "huddled together in a fashion depriving them of proper light and air space, while the back streets and yards are often indifferently paved and less clean than is desirable." Although this is, may be, the case in some instances, anyone who has known the town for thirty-five years as I have must appreciate the great improvement which has been made in the character of the dwellings to which reference has been made and in the general sanitary condition of the town. Even at this present moment the Authority have under consideration the improvement of about 25 dwelling-houses.

With regard to the notification of the disease, Dr. Thomson says that we might improve our methods of obtaining information of the possible occurrence of measles from the schools. When another epidemic comes round it will be found that this matter has been attended to.

Arrangements have, I believe, been made since the date of the visit to get daily information direct from head teachers. The managers of the Sunday schools, to which reference is also made in the Report, were well aware of the presence of the disease, and that the Authority were about closing the day schools. The Authority were made aware that the managers of some of the Sunday schools would decline to close, even if requested by the Authority to do so, the reason stated being the

interference with their arrangements which was caused by the closing during the epidemic of 1895, when I believe every Sunday school in town was closed.

Dr. Thomson told me, that in his opinion, we already possess the power to compulsorily close the Sunday schools, which should have been done. This may be so, but such a course has never before been taken, expression of the wish of the Authority having always previously been found sufficient. With regard to the power to do so, I do not feel called upon to express an opinion. It is well to remember that there is a limit to the power of the Authority to remove cases for isolation; the ultimate power is in the hands of the Magistrates. Some misapprehension appears to have arisen in Dr. Thomson's mind as to the action of the Authority with regard to the Public Libraries. He states that the Authority, although informing the Librarians of the occurrence of infectious disease in a household, did not further inform them when these households might be regarded as free from infection. Fortunately this has not been the case, as the Librarians were always notified when the household was free from infection.

In the case of the measures taken with a view to prevent the spread of measles in invaded dwellings, Dr. Thomson takes a less favourable view of our action. It is quite evident from the Report that Dr. Thomson considers that the Authority should take measures—firstly, that the isolation of the patient should be made complete, and secondly, that the clothing, bedding, and other contents of the room or rooms used for isolation should be disinfected by steam.

I can quite believe that in a cottage house some of the children who have not yet taken the disease sleep in the same room as the patient; indeed, I heard one parent at least tell Dr. Thomson that such was the case. Dr. Thomson further advocates hospital isolation and treatment. Of course this refers only to the earlier cases, for which it is true that hospital accommodation might be provided. If such early cases were removed to Hospital they would be properly isolated, and the risk of spreading the disease avoided, provided all cases came to the knowledge of the Authority. The disinfection of the clothing should

also be carried out. This would require the provision of a van in which to return the purified articles. The present ambulance van might be used to take them to the disinfecter.

Then comes the question of the staff employed by the Authority to carry out its sanitary duties. Dr. Thomson informed me that a population of 10,000 was considered to provide full work for one Inspector, and that in Lancaster at least three inspectors should be employed, with additional qualified assistance when diseases such as scarlet fever and measles were epidemic. I think it would be well if this Authority ascertained the proportion of inspectors to population engaged in non-county boroughs, so as to assimilate the procedure of Lancaster to that of other town similarly situated.

I would recommend also that the Sanitary Office be removed from its present inconvenient situation, where it is so much hidden away, that many people do not know of its existence, to premises more compatible with the importance of its duties.

DIPHTHERIA.

No new case of this disease was reported in 1897, but a death from this cause was registered, which occurred in the spring of the year in a house newly built on a site which had previously been used for agricultural purposes only. I arrived at the conclusion that in all probability the case was one of croup of unusual severity.

Last year seven cases of the disease were reported, with three deaths, and a case-mortality of 42·85 per centage of attacks.

WHOOPING COUGH.

Two deaths from this very fatal disease were registered in 1897, as compared with 19 in 1896. I do not think that many cases occurred in 1897, indeed none came to my knowledge except the two which terminated fatally, and that only after death.

DIARRHŒA.

This disease was much more prevalent in 1897 than is usual in Lancaster : it was also unusually fatal, 32 deaths having been registered

All these deaths were those of infants, except the case of a man 49 years of age who died in the Workhouse, and probably this was not purely a zymotic case.

Of the 31 deaths of infants occurring in the town, some might possibly be put down to teething or gastric troubles not of a zymotic nature, but considering that all but 5 occurred in August and September, I think a zymotic origin is clearly indicated.

A reference to table G will show the monthly average temperature and rainfall, which should be taken into account in considering zymotic diarrhœa. I have arranged these deaths to show at a glance the time of year when they occurred :—

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Tls.
Under 5	1	1	12	14	3	...	...	31
Over 5..	1	...	...	...	1

The connection of this disease with dirt and filth has long been established, and it is known that it is caused by the presence of a microbe, which grows and reproduces freely in a subsoil polluted with decayed vegetable or animal matter when the ground is sufficiently warm and damp; hence its prevalence in the late summer and early autumn months.

My remarks upon enteric fever apply equally to this disease, and similar action should be taken.

Below I give in tabular form a list of deaths from diarrhœa :—

Sex.	Age.	Date.	Remarks.
F	... 11 months	... June 13	... Occasional smell from sewer.
F	... 7 months	... July 25	... House damp at back.
M	... 3 years	... Aug. 4	...

M ...	2 months	...	Aug. 5	...	No back to house; deficient air-space.
F ...	5 months	...	Aug. 9	...	
M ...	10 months	...	Aug. 13	...	Dirty; deficient ventilation close to dirty w.c.
F ...	8 months	...	Aug. 14	...	
M ...	3 months	...	Aug. 19	...	
F ...	2 months	...	Aug. 21	...	Deficient light and air-space.
F ...	19 months	...	Aug. 27	...	Cobble paved yard.
F ...	6 months	...	Aug. 26	..	Confined yard at back.
M ...	12 months	...	Aug. 29	...	Damp at back.
F ...	2 months	...	Aug. 30	...	
F ...	5 months	...	Aug. 30	...	No through ventilation.
F ...	16 months	...	Sept. 3	...	
M ...	8 months	...	Sept. 3	...	Deficient ventilation; dirty street.
M ...	49 years	...	Sept. 2	...	Probably not zymotic.
M ...	8 months	...	Sept. 5	...	Old property.
M ...	6 months	...	Sept. 3	...	
M ...	8 months	...	Sept. 5	...	Delapidated property; deficient air- space at rear.
M ...	9 months	...	Sept. 6	...	Delapidated property; deficient air- space at rear.
F ...	1 month	...	Sept. 7	...	No through ventilation.
M ...	16 months	...	Sept. 8	...	
M ...	6 months	...	Sept. 10	...	Troublesome drain.
M ..	18 months	...	Sept. 12	...	Deficient ventilation; dirty street.
F ...	6 months	...	Sept. 13	...	Deficient ventilation.
F ...	10 months	...	Sept. 18	...	
F ...	8 months	...	Sept. 23	...	Deficient ventilation.
M ...	13 months	...	Sept. 28	...	Poor back yard.
F ...	10 months	...	Oct. 1	...	Nurse child; dirty street.
M ...	3 months	...	Oct. 12	...	Deficient air-space.
F ...	7 months	...	Oct. 28	...	

PHTHISIS.

Sixty-six deaths were registered as due to this cause in 1897. Thirty-four of these deaths occurred in the town, 29 in the County Asylum, 1 in the Infirmary, and 2 in the Workhouse.

Last year 59 such deaths were registered, 32 having occurred in the town, 22 in the County Asylum, 2 in the Royal Infirmary, 2 in the Workhouse, and 1 in the Castle.

The death-rate from this cause for 1897 is 1·72 per 1,000 of population, as against 1·59 in 1896, and 2·20 in 1895.

Below I give a table of deaths from Phthisis in the Borough and in the Institution for the last five years.

	1893	1894	1895	1896	1897
Total deaths from Phthisis	70	54	79	59	66
Death-rate „	2·08	1·55	2·20	1·59	1·72
Deaths from Phthisis in Borough	33	32	43	32	34
„ „ County Asylum	30	19	31	22	29
„ „ Royal Infirmary	2	2	1	2	1
„ „ Workhouse	5	1	4	2	2
„ „ Castle .....	..	...	...	1	...
„ „ Ripley Hospital ... ..	...	...	...	...	...
„ „ Bowerham Barracks..	...	...	...	...	...

For 1897 the death-rate for the town alone is ·96—it was ·93 in 1896, and 1·33 in 1895, per 1,000 of population.

RESPIRATORY DISEASES.

The deaths from Bronchitis, Pneumonia, and Pleurisy during the year 1897 amounted to 110—equal to a death-rate from this cause of 2·86 per thousand of population.

In the year 1896, the number was 154—equal to a death-rate of 4·15 per 1,000 of population.

The deaths in the town alone from this disease during 1897 amounted to 73—equal to a corrected death-rate from this cause of 2·06 per 1,000 of population.

In 1896 these deaths numbered 99—equal to a corrected death-rate of 2·89 per 1,000 of population.

INFLUENZA.

Seven deaths were registered from this cause in 1897. The deaths occurred, 2 in January and 1 in each of the months: February, March, April, August, and December. These 7 deaths are equal to an annual death-rate of ·18 per 1,000 of population.

Last year 4 deaths were registered from this cause—equal to an annual death-rate of ·10 per 1,000 of population.

As each year comes round, this complaint appears to be less and less dependent upon infection for its spread. It seems as if, when once influenza has attacked anyone, after recovery, so called, has taken place, the germs of the disease remain in the system, and whenever a chill is taken, almost however slight, the influenza recrudesces and another attack is inaugurated. At the same time, although now an annual visitor, a great decrease has taken place in the virulence of the disease.

INJURIES

were in 1897 registered as the cause of 16 deaths. Three cases were in children under 5 years of age, and 13 in persons over that age. This number of deaths is equal to a rate of ·41 per 1,000 of population, and is less than last year, when such deaths amounted to 19, with a death-rate of ·51 per 1,000 of population.

UNCERTIFIED DEATHS

were six in number ; 5 were cases of infants--the eldest not more than 8 months old, and the other case was that of a man aged 73 years. These deaths represent a rate of $\cdot 15$ per 1,000 of population.

INQUESTS.

It was found necessary to hold inquests in 18 cases, these deaths being equal to a rate of $\cdot 47$ per 1,000 of population.

The following is a list of the cases :—

M ... 23 years	Found drowned.
M ... 50 years	Perforation of intestines due to cancer.
M ... 59 years	Asphyxia, due to food in throat.
M ... 65 years	Fractured rib.
M ... 19 years	Syncope.
M ... 22 months	Scalded.
M ... 47 years	Died suddenly from heart disease.
F ... 58 years	Run over by cab.
M ... 16 years	Found drowned in Swimming Bath.
M ... 65 years	Natural causes.
M ... 65 years	Natural causes.
F ... 40 years	Cut her throat.
M ... 12 months	Died from burns.
M ... 23 years	Burnt by explosion of benzoline.
M ... 49 years	Run over by cart.
M ... 50 years	Natural causes, probably heart disease.
M ... 28 years	Exhaustion ; loss of blood.
F ... 31 years	Died suddenly from natural causes.

BIRTHS.

During the year 1897 the number of births registered in Lancaster was 957.

Of these 480 were those of males and 477 those of females, equal to an annual birth-rate of 27.07.

In 1896 the number of births registered was 938. Of these 466 were those of males and 472 those of females, equal to a birth-rate of 27.46 per 1,000 of population.

The birth-rate of Lancaster appears to be gradually but surely decreasing, as the subjoined table will show :—

Year.	No. of Births.	Males.	Females.	Rate per 1,000.
1887	708	377	331	33·03
1888	757	385	372	31·48
1889	988	508	480	35·62
1890	923	486	437	32·65
1891	977	490	487	31·29
1892	947	511	436	32·08
1893	991	491	500	32·34
1894	908	526	382	31·49
1895	936	469	467	28·40
1896	938	466	472	27·46
1897	957	480	477	27·07

The time of year at which these births occurred is as follows :—

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
Males ...	31	41	46	44	37	37	45	44	35	37	42	41
Females	39	38	58	45	38	39	44	48	31	32	32	33
TOTALS...	70	79	104	89	75	76	89	92	66	69	74	74

NOTIFICATION OF INFECTIOUS DISEASES.

One thousand two hundred and ninety-four cases of Infectious Disease were notified to me in 1897, and were as follows :—

Scarlet Fever	11
Enteric Fever	55
Measles	1228
	<hr/>
	1294

Of these cases, 40 occurred in the six principal Institutions of the town, namely :—

Scarlet Fever.....	1
Enteric Fever.....	7
Measles	32
	<hr/>
	40

In the matter of notification Dr. Thomson, when holding his enquiry about measles, appeared gratified (see the opening paragraphs of his Report and Appendix A) that the dual notification which we have in Lancaster (I mean the notification by householder as well as medical attendant) had worked so well, and that so many notices from householders had been sent in. The credit for this state of affairs is, I feel, largely due to your late Medical Officer of Health, Dr. Harker, and your late Sanitary Inspector, Mr. Isaac Smith, who worked this clause with so little friction and so successfully in the years immediately succeeding the passing of the Act.

SANATORIUM.

Only 30 patients have been received into the Sanatorium during the year under notice, of which number 23 were cases of enteric fever, and the remaining 7 were cases of scarlet fever.

Of these 23 cases of enteric fever, 18 recovered and 5 died ; whilst of the 7 scarlet fever cases, 1 died and 6 recovered.

Of the 30 cases admitted, 29 were treated by their own medical attendant, and 1 by myself.

Twenty-four visits have been made to the Hospital, which has always been found clean and tidy, and no complaints have come to my knowledge.

It must be borne in mind that when this Sanatorium was built, it was not purposed to treat any diseases there except scarlet and enteric fevers, consequently, if this Authority determine to afford to the public facilities for isolating those early cases of measles which occur in the town, the Sanatorium will require an additional two wards.

DISINFECTOR.

The disinfector has worked well during the year, and given every satisfaction. If the bedding and clothing of all fever cases occurring in the town are in future to be passed through the disinfector, it will be made much more use of than has been the case formerly, and will frequently take up the whole time of the man in charge, who is now able in his spare time to act as gardener and odd man.

OLD PROPERTY.

Last year I pointed out to owners of this class of property that "unless the owners give their property more attention, and spend more money upon it in attending to its sanitary requirements, the Authority will be compelled to step in and deal drastically with these dwelling-houses." What I said last year I reiterate to-day. If no notice is taken of the matter so much the worse. Houses, which when first built were looked upon as good, sound property, have, by the passage of time, the change in sanitary requirements, and the continuous building operations going on around, become so much deteriorated that in many cases nothing short of re-building will make them conform to modern sanitary requirements.

Much of this property has been acquired by its present owners "for an old song," and owing to the demand for cottage houses in Lancaster is paying larger interest on the investment than can be obtained in any other way.

THE SEWERS

appear to be kept in good order and effectually to perform their work. Occasionally in summer one hears of bad smells from the ventilators in the streets. There is no doubt, as I mentioned last year, that the growth of the town will compel the adoption of some form of ventilation to carry off the sewer gas.

SCAVENGING.

This matter is in Lancaster undertaken by the Authority, and I am bound to say, that it is well carried out. The system by which it is hoped to secure the more frequent emptying of the ashpits is still on its trial. Under the old method, the contents of the ashpits were deposited in the street to await the arrival of the cart which conveys them to Harry's Hole. It is now intended to place the material at once in the cart instead of making an accumulation of refuse in the street; this will doubtless be a great improvement, and I hope will soon become the established rule throughout the town.

The place known as "Harry's Hole," which, for many years, has served as a place of deposit for all the refuse of the town—both trade and domestic—is now being rapidly filled up, and the Authority is contemplating the provision of a Destructor. If such a course be determined upon, it will be necessary to consider carefully the site of the building, and also to adopt such a form of Destructor, as shall best secure a perfect combustion of the materials placed therein, so as to avoid the emission of noxious fumes and vapours.

THE WATER SUPPLY,

I am glad to say, does not vary from year to year. It is still of the same excellent quality, which has always been its characteristic since first the service was inaugurated. It speaks volumes for the foresight of the promoters of the scheme, and is one of the chief attractions to persons contemplating a residence in Lancaster. When absent from home one frequently hears the remark—"you have such excellent water in Lancaster."

FOOD AND DRUGS.

The responsibility for the analysis of these articles rests with the police. I understand some forty samples have been during 1897 submitted to the appointed analyst, who has reported favourably of each one of them.

THE INSPECTION OF MEAT, ETC.

In twenty cases, meat or other articles of food, have been submitted to me for my inspection. In ten cases it has been found necessary to condemn the food, but the other ten cases were passed. The cattle

in this district appear to be exceptionally afflicted with tuberculosis, and I attribute this to three great causes. One is in breeding of the cattle, rendering them of less robust constitution, and therefore more susceptible to the disease. The second is the housing of the cattle in winter in old-fashioned shippens, which are deficient in light, ventilation, and air space. They are also in most cases excessively damp. The third great cause is the treatment of the cattle when in the shippens, where, be it remembered, they remain for nearly six months of every year. Every nook and cranny, even the bottom of the shippen door is stuffed up to prevent the entrance of the cold, but pure and fresh air. The cattle are treated thus to keep them warm, so that they may give more milk, and at the same time consume less food. The consequence is that for the time stated, night and day, they breathe air contaminated by the breath of themselves and companions—air strongly impregnated with the products of respiration, together with the bacillus of tuberculosis, deadly poisonous in their effects. Under such conditions who can wonder that the scourge of tuberculosis grows apace, supplied as it is with the four necessities of its existence—damp, darkness, warmth, and lack of ventilation. I am of opinion that cattle prone to tuberculosis are more prolific and better milkers than the ordinary run of healthy cows, and therefore are more profitable to the farmer.

INSPECTION OF THE TOWN.

This has been carried on throughout the year in the older portions of the town, for there it is that the need of inspection is greatest. The fact that a Sub-Committee of the Sanitary Committee personally visited portions of the town was, I think, productive of much good. I should be glad if such an inspection could again be made.

THE SLAUGHTER HOUSE.

During my frequent visits to the Abattoir, I have noticed the presence of many children who seem to frequent the place in order to see the beasts killed. I should be glad if this practice could be stopped, as it is not conducive to the moral welfare of the children.

With great regret I have also noticed, that the slaughtering of their fellows can be observed by the coming victims in their pens. I

have no reason to credit animals with a great amount of mental feeling in the matter, but still I think, on the grounds of common humanity, the animals might well be spared this additional pang.

There is also another matter which indirectly comes under the notice of the Medical Officer of Health. I mean the conveyance of calves from the Auction Mart to their several destinations.

The most usual course is to walk them down the streets in charge of boys. It is a tedious matter, as the little animals, immature in their thoughts as well as their locomotion, frequently stop, and the boys (occasionally grown up men) induce them to continue on their way by twisting and pulling their tails, and by acts of similar brutality. There is urgent necessity for interference in this matter.

SANITARY CONVENIENCES.

These necessities have been regularly cleansed, and kept in good order with a plentiful supply of water. I wish I could convince the Authority of the necessity of a large increase in the number of such places. During the year one large and important one, which occupied a prominent position and had a career of usefulness, has been taken away. I certainly understood at the time that it was to be re-erected in a more retired situation, but such as not as yet been done. I hope the Authority, ere the summer season of railway excursions, will erect more in easily accessible places. If it is determined to put them in out of the way places, could not sign boards be put up to direct the stranger to them, as is done in some other towns.

COWSHEDS AND DAIRIES.

Although the supervision of the cowsheds is not in the hands of the Sanitary Authority, I propose to make a few remarks about them, as the buildings used for that purpose in Lancaster are, in many cases, old buildings adapted for the purpose, and are not, according to present views, as light, airy, and sanitary as could be desired.

I do not suppose that at present the cubic space allotted per cow is anything like as much as is now demanded—800 to 1,000 cubic feet per cow. This is the least space which should be provided, and

means should be taken to change this air at least six times an hour. I have not the slightest doubt that no cowshed in Lancaster could fulfil these conditions.

In some places, notably Carlisle, where a vigorous crusade has just been inaugurated against tuberculosis, great stress is being laid upon the necessity for testing each cow with the tuberculin test devised by Koch.

Every animal which, being tested with the serum, exhibits any rise of temperature, should, according to the best authorities be condemned. The introduction of a diseased cow into the Shippon may, and probably will, cause all the other inmates to become affected, and the damp walls and floors are frequently the congenial home of these disease germs. It can easily be seen, from what has been here stated, how necessary it is, that something should be done in the direction of improving these places, so as to prevent the health of those members of the community, who are large consumers of milk—I refer especially to children—from ingesting with their food the germs of so terrible a disease. I do not at this time propose to enter upon the question of dairies, as enough has been said to call attention to the matter. I do not think that the dairies in Lancaster are one whit better than the cowsheds. The Local Government Order on this subject might with advantage be adopted.

CANAL BOATS.

These have received 53 visits from the Inspector. Details of the action taken will be found in his report, which is appended.

LODGING-HOUSES.

In the Inspector's Report the state of these houses is treated of in detail, and he has presented a very full report. In my opinion there is no doubt that the lodging-house opened by the Corporation has been a success, and would, I think, be still more so if a modern building were provided. The accommodation in the town for the persons who frequent such lodgings has proved quite inadequate during the past year, many persons having been found sleeping out, although able to pay for accommodation which they were not able to obtain.

In the country districts around the town many persons have suffered great hardships from being arrested by the police and punished by the magistrates for sleeping out. This is a state of things which should be speedily ended, either by public or private enterprise.

BAKEHOUSES.

These have been visited, and will, I think, compare very favourably with those in other towns. They are kept in good order, and are regularly cleansed and purified.

THE AMBULANCE.

The town is at last in possession of a good modern ambulance, which has proved a great convenience and comfort to the patients who have used it. Moreover, it adds to the dignity of the Authority, and renders its proceedings with regard to the removal of patients much more important in the eyes of the public.

Before closing this report, I think it is my evident duty to say something about the extension of the boundaries of the Borough. Soon after the last extension was obtained, it soon became evident that there was no finality in the result. In every direction where land is obtainable for the purpose, buildings are springing up, and it would be advantageous, that the persons resident in them should be under the same Authority as residents in the town. In the case of the Silk Mill Estate, it is certain that infectious disease has been carried thence into Lancaster, and the same is probably the case with Scotforth and Skerton. The people who live in these houses, of which I speak, are for the most part employed in the Borough, many of their children are educated there, the water and gas supply are from the same centre, and everything points towards the formation of one community. I hope the Sanitary Authority will impress upon the Corporation of Lancaster the fact that the time is fast approaching, nay even now, has become ripe for an extension of the boundaries.

I remain,

Mr. Mayor, Mr. Chairman, and Gentlemen,

Your obedient Servant,

G. R. PARKER.

March 10th, 1898.

TABLE A.

TABLE OF DEATHS during the year 1897, in the Urban District of LANCASTER, classified according to Diseases, Ages and Localities.

[illegible]

TABLE B.

TABLE OF POPULATION, BIRTHS, and of NEW CASES OF INFECTIOUS SICKNESS, coming to the knowledge of the Medical Officer of Health, during the year 1897, in the LANCASTER Urban District, classified according to Diseases, Ages, and Localities.

[illegible]

TABLE C.

COUNTY OF LANCASTER.

SUMMARY OF MEDICAL OFFICER'S REPORT FOR 1897.

URBAN SANITARY DISTRICT OF LANCASTER.

Area in Statute Acres—1680. Population (Census) 1891—31,034. Population, Estimated 1897—38,228.

Name of Medical Officer of Health.....G. R. PARKER. Salary.....£ 110. { Male.....381 } Total.....726

Births Registered { Female.....477 } Deaths Registered { Female.....345 }

Birth Rate	27·07.
Death Rate.....	18·99.
Rate of Infants Deaths under 1 year, to 1,000 births	151.
Death Rate from the seven principal Zymotic Diseases, per 1,000 of population	2·85.
Diseases prevalent.....	Enteric Fever and Measles.
Period	Spring and Autumn.
What Action taken?.....	Inspection and Disinfection.
Any Schools Closed	Yes.
If so, for what Diseases?.....	Measles.
What is the character of the Hospital Accommodation?	Quite satisfactory.
Is it Joint or otherwise?	Otherwise.
No. of Beds available for the District?	About 32.
What were the Cases Treated?	Scarlet Fever and Enteric Fever.
Deaths in Hospital	Seven.

From what Causes?.....	Enteric Fever, 6; Scarlet Fever, 1.
How is Disinfection carried out?	By Steam.
Apparatus used?	Washington Lyons.
Is the Infectious Disease (Notification) Act in force?	No; Private Act, 1880.
Are any Diseases not specifically mentioned in the Act notifiable?	Yes.
If so, what are they	Measles.
What is the character of House Accommodation?...	Good.
Has any action been taken under "The Housing of the Working Classes Act, 1890"?.....	No.
Have any houses condemned as unfit for human habitation been closed or demolished? If so, how many?	No.
Is the Water Supply good and subject to your inspection?.....	Excellent.
Is Scavenging carried out satisfactorily?.....	Yes.
By Sanitary Authority or Contract?.....	By Sanitary Authority.
How is the Refuse disposed of?	Carted to a "tip" away from the town.
What is the character of Drainage and the form of Sewerage Disposal?.....	Water carriage into tidal position of river.
Canal Boats	53 visits; found in good order.
What is the condition of the Bakehouses?	Good.
Slaughter Houses?	Public Abattoir.
Lodging Houses?.....	Thirteen.
Are they Registered?	Yes.

Are the Dairies, Cowsheds, and Milkshops periodically inspected?	Yes; by Police.
Have any Regulations been made by your Authority under the Order of the Local Government Board?	No.
Have the Factories and Workshops been inspected and with what result?	Yes.
Food unfit for Human Consumption, Amount seized?	Seizure in 20 cases, 10 passed, 10 condemned.
Any Special Report of Medical Officer of Health during the year?	No.
Department of Inspectors of Nuisances:—	
No. of Notices served	948.
" Nuisances remedied..... ..	948.
" Legal Proceedings taken and result.....	None.
Smoke:—	
No. of Observations	Twenty-two.
" Legal Proceedings taken and result	None.
What is the time limit allowed for the emission of black smoke per hour?.....	Eight minutes.
Has the Authority adopted:—	
(a) "The Infectious Disease (Prevention) Act, 1890"?	No; Private Act, 1880.
(b) "The Public Healths Acts Amendment Act, 1890"?	Yes.

TABLE D.

Showing details of statistics of last five years.

	1893	1894	1895	1896	1897
Gross Population of Lancaster	33,524	34,631	35,830	37,029	38,228
Total Deaths	756	618	750	729	726
Gross Death-rate	22.55	17.84	20.93	19.68	18.99
Population (less 6 Institutions)	30,642	31,749	32,948	34,147	35,346
Total Deaths in Boro' (less 6 Institutions)	528	413	516	479	492
Corrected Death-rate	17.23	13.00	15.66	14.02	13.91
Deaths of Males	254	202	259	254	262
Deaths of Females	274	211	257	225	230
Deaths of Infants under 1 year	164	112	138	152	145
Death-rate of do. $\frac{1}{1,000}$ registered births	166	111	147	163	151
Deaths of Children 1 and under 5 years...	100	40	65	48	92
Total Deaths under 5 years of age	264	152	203	200	237
Deaths of Persons 5 and under 65 years...	139	158	197	180	165
Deaths of Persons over 65 years	124	103	116	99	90
Number of Zymotic Deaths	87	27	43	40	109
Zymotic Death-rate.....	2.56	.85	1.30	1.37	2.85
Number of Births	991	1008	936	938	957
Birth-rate	32.34	31.49	28.40	27.46	27.07
Births of Males	491	526	469	466	480
Births of Females	500	482	467	472	477

TABLE E.

A Table showing the number of cases of Zymotic Disease treated at home and at the Sanatorium, and comparing the results of the five years—1893, 1894, 1895, 1896, 1897.

	1893	1894	1895	1896	1897
Total cases notified.....	532	171	1535	183	1294
Total cases treated at home	454	119	1491	139	1264
Recoveries (treated at home).....	428	111	1467	111	1162
Deaths (treated at home)	26	8	24	28	102
Total cases removed to Sanatorium	78	52	44	44	30
Recoveries (Sanatorium)	73	49	44	44	23
Deaths (Sanatorium)	5	3	1	0	7
Sanatorium cases treated by M.O.H.	18	17	8	13	1
Sanatorium cases treated by their own Medical Man.....	60	35	32	31	29
Total Recoveries.....	501	168	1511	155	1185
Total Deaths	31	11	25	28	109
Visits made to Sanatorium by M.O.H.	131	127	83	139	24

TABLE F.

Showing Causes of Death of Infants under one year old,
during the years 1894, 1895, 1896, and 1897.

	1894	1895	1896	1897
Diarrhœa, Gastro - Enteritis, Cholera Infantum	21	35	30	30
Bronchitis, Pneumonia, and Pleurisy.....	14	21	30	21
Marasmus, Malnutrition, Debility, Inanition	20	20	28	22
Convulsions	26	15	14	15
Hepatitis .....	...	...	...	1
Meningitis, Hydrocephalus, and Tuber- cular Meningitis	4	5	7	5
Measles .....	...	6	...	16
Eczema .....	...	...	...	1
Premature Birth	9	22	13	20
Intussusception of Bowel	1	...	...	1
Spina Bifida	1	...	2	1
Pyelitis .....	...	...	...	1
Congenital Syphilis .....	...	1	...	1
Whooping Cough	3	...	8	1
Intestinal Colic .....	...	...	...	1
Nephritis .....	...	...	...	1
General Atrophy.....	...	...	...	1
Atelectasis .....	...	1	6	5
Ulcerative Stomatitis.....	...	...	...	1

By the kindness of Dr. Schloesser, I am able to give the following table, showing the total Rainfall and Mean Temperature for each month of the year 1897:—

TABLE G.

Showing rainfall each month.

Month.	Total rainfall in inches.	Mean Temperature.
January	·85	35·4
February	2·75	40·5
March... ..	5·20	42·1
April	2·61	43·5
May	1·90	49·2
June	3·76	58·4
July	1·40	60·8
August	5·24	59·7
September.....	4·31	52·9
October.....	2·18	51·6
November.....	5·40	46·8
December	5·45	42·7
Total ...	41·05	

INSPECTOR OF NUISANCES' ANNUAL REPORT

FOR THE YEAR 1897.

To His Worship the Mayor, the Chairman, and Members of the Sanitary Committee of the Lancaster Corporation.

MR. MAYOR, MR. CHAIRMAN, and GENTLEMEN,

I beg to present to you my annual report for the year 1897, and in doing so I venture to say that we may congratulate ourselves on the healthy condition of the town generally.

DEATH-RATE.

The death-rate in the town (not including the public institutions), from all causes, was 12·86 per 1,000 of population. The death-rate in 1896 was 14·02. The following figures, taken from the Medical Officer's quarterly reports, show the comparative death-rates in the Borough for the past five years :—

	Annual Death-rate per 1000 of Population.					
	1893	1894	1895	1896	Average 1893-6	1897
First Quarter	18·17	14·64	18·74	15·34	16·72	16·00
Second „	13·44	13·97	12·86	14·60	13·72	11·09
Third „	17·72	12·09	12·99	12·36	13·79	14·02
Fourth „	19·36	11·26	17·96	13·93	15·63	10·35
Year	17·17	13·00	15·64	14·06	14·97	12·86

INFECTIOUS DISEASES.

The past year has been wonderfully free from infectious diseases (measles excepted), cases of scarlatina especially being remarkably few. The following figures give the comparison for the past eight years :—

	1889	1890	1891	1892	1893	1894	1895	1896	1897
Diphtheria	3	1	10	20	10	7	8	7	—
Enteric Fever	18	41	53	40	39	47	28	64	55
Measles	1315	91	111	752	609	46	1405	58	1228
Puerperal Fever	1	2	2	1	2	1	1	1	—
Rotheln	26	11	3	11	8	3	32	14	1
Scarlatina	105	173	148	166	180	69	62	32	12
Small Pox	—	—	—	5	10	2	—	7	—
Total.....	1468	319	327	995	858	175	1536	183	1296

In the early part of the year we were visited by an outbreak of measles, the total number of cases reported being 1228. The bulk of the cases were in the first three months, *i.e.*, January 310, February 463, March 188. In July, Dr. Theodore Thomson, of the Local Government Board, visited Lancaster, for the purpose of enquiring into the cause of the epidemic. His report to the Local Government Board will, I have no doubt, in due course be made public. Several suggestions were made by him, the following (in my opinion) being one which the Sanitary Committee might very well adopt; *i.e.*, issue an illustrated calendar, and in the place of the usual trade advertisement print useful information *re* the symptoms of various infectious diseases, isolation, disinfection, &c., the calendars to be distributed from house to house throughout the Borough. One very important item in connection with isolation is keeping children, who live in infected houses, away from school. No injustice is now felt by the school managers, as the absence from school by children detained by a local authority is allowed for in deciding the grant. Dr. Thomson suggested keeping from school all children in an infected area; for instance, if a case of measles breaks out in a yard or court, all the children in that yard should stay from school. One other

matter requires serious consideration, and that is the extension of the Borough boundary. The Silk Mill estate in Bulk is a thickly-populated place, and the number of children living in that portion of Skerton immediately outside the Borough is large. The children attend schools in the Borough, and the parents for the most part work in the town; and yet we have no supervision over them when an outbreak of any infectious disease occurs. We keep children from infected houses in the Borough from school, and look after library books, &c., from the same houses; but our children run the risk of taking a disease from the children in the rural district, because they do *not* stay away from school. I am glad to say the masters and mistresses of the elementary day schools have promised their aid in this matter, but, in the interests of all the town, the thickly-populated neighbourhoods adjoining the Borough should be added to the Borough. During last autumn there was an outbreak of enteric fever on the Silk Mill estate. Some of the cases should have been removed to a hospital, but as there was no hospital to which they could be removed, they remained at home, and two or three cases in the Borough were traced from them.

The number of patients treated in the Sanatorium during 1897 was 30, 24 were discharged, and 6 died.

The following figures show the number of cases admitted since the year in which the Sanatorium was built (1891):—

	1891	1892	1893	1894	1895	1896	1897
Diphtheria	—	2	—	—	—	—	—
Enteric Fever	27	22	8	20	12	16	23
Scarlatina	81	107	56	33	32	22	7
Small-pox	—	1	8	1	—	7	—
Total.....	108	132	72	54	44	45	30
No. of Deaths	7	11	5	4	—	1	6

We have had no small pox during the year, but the question of providing more suitable hospital accommodation for patients suffering from that disease has been under consideration. Before long, I trust, the matter will be more advanced. The new ambulance van for removing patients is a great improvement on the old cab, and has given satisfaction. Patients can now be moved with less risk than formerly.

COMMON LODGING HOUSES.

The Common Lodging Houses of the Borough have been visited regularly; they are kept, on the whole, in a satisfactory condition. There were at the commencement of the year 12 houses on the register; 4 of the 12 have been closed as common lodging houses, and 5 have been opened, the number now on the register being 13. The question of "insufficient accommodation" has been considered, but nothing definite has been done up to the present. That the registered houses have been overcrowded is an undeniable fact. The following figures (adults only), taken from the weekly returns of the lodging house keepers, show the extent of the overcrowding:—

Month.	Registered Accommodation.	Average No. of Lodgers.
January.....	173	163
February	173	164
March	175	161
April	175	163
May	175	174
June	175	174
July	179	181
August	179	185
September	172	190
October	176	189
November	185	183
December.....	185	176

The figures for the months January to May do not show the houses to be overcrowded, but some of the returns were proved to be inaccurate, so that for comparison the figures from June to December only should be taken. Those figures show clearly that the houses have been overcrowded, but not to the extent which might have been imagined, but I

would point out that the figures given are the average, not the maximum. The maximum numbers accommodated are as follows:—January 180, February 175, March 175, April 175, May 206, June 203, July 203, August 198, September 207, October 214, November 198, December 198. The accommodation to be satisfactory should be for the maximum and not for the average. I would like to explain my action in recommending for registration houses which are not altogether suitable for the purpose, because the action seems to have been totally misunderstood by many. We have in the Borough many unregistered houses, where weekly lodgers are accommodated. Some of these houses are, in reality, common lodging houses, where nightly lodgers are taken; but the difficulty has been to prove that fact. The difference between a registered and an unregistered house is this: In the former we have more direct supervision, and can prevent overcrowding; we insist on proper ventilation, cleansing, limewashing, &c.—in short, we have the houses directly under our control. In the latter, as we have no power to visit during the night, we cannot prevent overcrowding, and further, we have not the control of the houses, or rather, we have only the same control as over all private houses, and that is not sufficient for lodging houses. It is therefore, in my opinion, much better to register “unsuitable houses,” and thus have them under control, than for the same houses to be used as common lodging houses without control.

INSANITARY DWELLINGS.

We have still in the Borough many insanitary areas. The Insanitary Dwellings Committee have decided to require property in Anne Street and Back Queen Street to be altered, so as to improve the condition of the neighbourhood. The improvements in Fox and Goose Yard and China Lane justify the Corporation in pressing for other improvements, and I trust the Anne Street improvement will be speedily followed by others nearly as important as that. An insanitary district affects the health, not only of that district, but of the whole Borough. The same committee, some time ago, visited many back yards, and decided to have them flagged, &c., in lieu of the existing pavement. Cobble pavement in back yards is a mistake, and should not be permitted.

ASHES.

The ashpits of the town are emptied periodically, about every five weeks. A few years ago, during a cholera scare, the committee decided to disinfect the ashpits *during the scare*. If householders would throw only dry ashes into the pits, disinfection would be needless, but all manner of offensive matter is deposited there, so I consider it would be advisable to cover the bottom of every pit every time the ashes were removed. The cost would be heavy I admit, but I contend that the benefit would out-balance the cost. The question has already arisen, "What must we do with the ashes when Harry's Hole is full?" Baffler's Hole, on the Marsh, has been for many years the tipping place for all kinds of ashes and rubbish. It has been called (and not unjustly) "Lancaster Stink Hole." The Surveyor has kept the place in much better condition during the past few years, but when the hole is filled we shall have finished with a huge nuisance. On the other hand there will be a great expense in providing a Destructor, an expense, however, which cannot be avoided.

CANAL BOATS.

52 canal boats have been inspected during the year. Of that number 5 were boats registered at Lancaster, 46 registered at Preston, and 1 registered at Kendal. The boats are kept in a most satisfactory manner, we have not met with a single case of sickness on them. There have been 7 cases of infringement of bye-laws, all the cases being on Preston boats. The infringements were:—No wooden partitions, painting of boats, and no water vessels. Each case was dealt with and the defect remedied. The Local Government Board Inspector visits the town annually, and each time has expressed his satisfaction with the boats and the books.

FOWLS.

A nuisance has been complained of in different parts of the Borough caused by the keeping of fowls, &c. in back yards. It appears that we cannot have bye-laws to govern this matter, but that each case must be dealt with on its own merits, the Local Authority only having power to deal with the cases which the Medical Officer certifies as nuisances.

THE PORT.

The old question of Glasson Dock water supply has been brought prominently forward during the past year, and there seems some prospect of the question being settled. The number of vessels visited is 43, of that number 33 were British and 10 Foreign, the average tonnage being 236 tons. Of the number visited, 31 were visited at Glasson and 12 at Lancaster.

SEWER VENTILATION.

The question of ventilating the main sewers of the town has again been raised. I am of opinion that the sewers throughout the town, and especially in the higher parts of the Borough (Freehold, Moorlands, Primrose, &c.), should be ventilated by ventilating shafts being carried to above the eaves of the adjoining buildings. I would condemn strongly the practice of ventilating the sewers by the down-spouts of the houses. The joints of iron down-spouts are for the most part open, and sewer gas escapes from them—a most objectionable thing. Where the spouts are connected to the sewer they should be trapped. The existing ventilators, which are simply carried up from the sewer to the level of the street, would, if a sufficient number of ventilating shafts were carried up into the air, prove excellent inlets; but alone, as they are, I consider the system deficient.

SLAUGHTER-HOUSES.

The Corporation Slaughter-houses have been regularly visited, and are kept in a very satisfactory condition. We have not this year experienced the difficulty formerly complained of, *i.e.*, disposing of the manure, as a very large quantity has been purchased by the Water Committee for their farm at Blea Tarn. The Slaughter-houses have been greatly improved by the new buildings and caretaker's house. The irregularities which have occurred have been trivial, and were not of sufficient importance to report to the Committee.

The number of animals slaughtered for food during the year was as follows :—

	Total.	Average per week.	Total, 1896.
Beasts	2579	50	2639
Calves	469	9	398
Sheep	13106	252	13408
Pigs	1177	22	1079
Total ...	17331	333	17524

UNSOUND FOOD.

We have not been troubled very much during the year with unsound food. The chief trouble has been tuberculosis, but the cases were none of them so serious as to make magisterial proceedings necessary. The number of cases dealt with is as follows :—

Beasts	11
Sheep	2
Fish	6
Miscellaneous.....	1
Total.....	20

We dealt with the cases in the following manner :—

Condemned and destroyed	10
Passed for food	10
Part passed and part condemned ...	—
Total.....	20

I would again comment on the practice adopted by some butchers, of slaughtering animals out of the Borough, away from supervision. A partially-diseased animal can be dressed by a skilful man in such a way as to defy detection, but the dressing does not necessarily remove the risk of eating the food. I cannot suggest a solution to the problem, but I would recommend the public to deal only with reliable butchers.

URINALS.

The public urinals are regularly cleansed and are in good condition. But we have not enough of them. Since the removal of the one in Stone-well, I have received many complaints of the nuisance caused by men and women using the yard entrances in the immediate neighbourhood. I would not venture to question the wisdom of the Corporation in removing that urinal; the old grievance was that the eye was offended, but the new one is that a veritable nuisance is caused by people making the entrance to yards and courts into urinals. The difficulty is in finding places where the urinals could be fixed. If that difficulty can be overcome, I would like to see many more public conveniences for both sexes provided.

VANS.

10 Hawkers vans have been visited. In one or two cases they have been overcrowded, but there have been no cases of sickness. Our inspection of them, for reasons I have stated on previous occasions, is a farce.

The following schedule gives in brief the details of the cases attended to by me during the year:—

Accumulation and Deposit of Offensive Matter.....	11
Ashpits not in accordance with requirements	52
Bakehouses visited from time to time.....	38
Canal Boats visited.....	52
do. Inspected for Registration	1
Chipped Potato and Fried Fish Shops visited from time to time ...	28
Common Lodging Houses do. do.	8
do. do. Inspected for Registration	5
do. do. Registered	5
do. do. Refused	—
do. do. Infringement of Bye-laws	18
Common Privies not satisfactory	5
Dangerous buildings, chimney stacks, walls, &c.	13
Dangerous cellar doors, &c., on Footpaths	3
Drains, Defective	214
do. Tested and found satisfactory	14

Factories and Workshops Inspected (<i>re</i> overcrowding, &c.)	19
Filthy Premises	7
Houses unfit for Human Habitation	3
Infectious Diseases.....	1296
Lodging Houses (Unregistered) Visited.....	2
Manure Pits not in Accordance with Requirements.....	15
Miscellaneous cases	62
Overcrowded dwellings, &c.	10
Pavement in Yards, &c., bad	6
Premises without sufficient w.c. accommodation	11
Smoke Nuisance	22
Spouts defective	110
Stagnant water in cellars, &c.	71
Unsound Food.....	20
Vans (Hawkers') visited	10
Vessels visited (Port of Lancaster).....	43
Waste Pipes defective	6
Waste Pipes connected with drain	75
Water Closets defective.....	203
Water Pipes and Supply defective	29
Total number of cases.....	<u>2,487</u>

I remain, Gentlemen,

Your obedient Servant,

FRED. W. SMITH,

ASSOC. SAN. INST.,

Sanitary Office,

Lancaster, January, 1898.

Inspector of Nuisances.

To the Chairman and Members of the Lancaster Urban Sanitary Authority.

MR. MAYOR, MR. CHAIRMAN AND GENTLEMEN,

I beg to present to you my Report for the quarter ending March 31st, 1897.

Total deaths occurring in the Borough of Lancaster during this quarter numbered 223, equal to an annual death-rate of 23·33 per 1,000 of population.

During the corresponding quarter of last year the deaths numbered 204, and the annual death-rate was 22·03 per 1,000 of population.

The deaths in the Borough of Lancaster (excluding the six Institutions) numbered 153, equal to an annual death-rate of 17·31 per 1,000 of population.

Last year during the corresponding quarter there were 131 such deaths, equal to an annual death-rate of 15·34 per 1,000 of population.

Of the 153 deaths occurring in the Borough of Lancaster, 84 were those of males, and 69 those of females; 82 occurred in children under five years of age, and 71 in persons over that age.

Deaths in the County Lunatic Asylum numbered 48; in the Union Workhouse, 13; in the Royal Infirmary, 8; and 1 in Ripley Hospital.

Deaths from the seven principal zymotic diseases:—Measles, 43; Enteric Fever, 4; Scarletina, 1; Whooping Cough, 1; and Diphtheria, 1; total, 50—equal to an annual zymotic death-rate of 5·23 per 1,000 of population.

During the corresponding quarter of last year there were 12 such deaths, namely:—Enteric Fever, 5; Whooping Cough, 4; Smallpox, 1; Diphtheria, 1; and Measles, 1—equal to an annual zymotic death-rate of 1·40 per 1,000 of population.

980 cases of infectious diseases have been reported during the last quarter, viz.:—Enteric Fever, 15; Measles, 961; Scarlet Fever, 3; and Rotheln, 1.

During the corresponding quarter of 1896 there were 76 cases reported:—Scarlet Fever, 19; Enteric Fever, 29; Measles, 19; Smallpox, 1; Diphtheria, 2; and Rotheln, 6.

Births registered in the Borough during this quarter were 253, comprised of 118 males and 135 females, equal to an annual birth-rate of 26.47 per 1,000 of population.

In the corresponding quarter of 1896 there were 193 births (105 males and 88 females), equal to an annual birth-rate of 22.60 per 1,000 of population.

I remain,

Mr. Chairman and Gentlemen,

Your obedient servant,

June 8th, 1897.

G. R. PARKER.

*To the Chairman and Members of the Lancaster Urban Sanitary
Authority.*

MR. CHAIRMAN AND GENTLEMEN,

I beg to present to you my Report for the quarter ending June 30th, 1897.

Total deaths occurring in the Borough of Lancaster during this quarter, 154, equal to a gross annual death-rate of 16.11 per 1,000 of population.

During the corresponding quarter of last year the deaths numbered 202, equal to a gross annual death-rate of 21.93 per 1,000 of population.

The deaths in the Borough of Lancaster (excluding the six institutions) number 106, equal to an annual corrected death-rate of 11·99 per 1,000 of population.

Of these 106 deaths, 56 were those of males, and 50 those of females. Forty occurred in children under 5 years of age and 66 in persons over that age.

During the corresponding quarter of last year these deaths numbered 124, equal to an annual death-rate of 14·60 per 1,000 of population.

Deaths in the County Asylum 28, in the Union Workhouse 11, in the Infirmary 7, in the Castle 1, and in Ripley Hospital 1.

Deaths from the seven zymotic diseases, 10, viz., enteric fever 2, measles 6, whooping cough 1, and diarrhœa 1—equal to an annual zymotic death-rate of 1·04 per 1,000 of population.

During the corresponding quarter of 1896 these deaths numbered 16, viz., enteric fever 2, diphtheria 1, and whooping cough 13—equal to an annual zymotic death-rate of 1·72 per 1,000 of population.

200 cases of infectious disease have been reported to me this quarter, namely, 190 measles, 7 enteric fever, and 3 scarlet fever.

Births registered in the Borough during the quarter ending June 30th, 1897, 240, comprised of 118 males and 122 females, and equal to an annual birth-rate of 25·11 per 1,000 of population.

In the corresponding quarter of 1896 there were 257 births, 121 males and 136 females—equal to an annual birth-rate of 30·26 per 1,000 of population.

I remain,

Mr. Chairman and Gentlemen,

Your obedient Servant,

G. R. PARKER.

To the Sanitary Authority of the Borough of Lancaster.

MR. MAYOR, MR. CHAIRMAN, AND GENTLEMEN,

I beg to present to you my Report for the Quarter ending September 30th, 1897.

Total Deaths occurring in the Borough of Lancaster during this quarter number 190, equal to an annual death-rate of 19·88 per 1,000 of population.

During the corresponding quarter of last year the deaths numbered 143, and the annual death-rate was 15·52 per 1,000 of population.

The deaths in the Borough of Lancaster (excluding the six Institutions) number 134, equal to an annual corrected death-rate of 15·16 per 1,000 of population.

Of these 134 deaths, 75 were those of males, and 59 those of females. 77 were under 5 years age, and 57 over that age.

During the corresponding quarter of last year, the deaths (exclusive of the six Institutions) were 105, equal to an annual corrected death-rate of 12·36 per 1,000 of population.

Deaths in the County Asylum, 33 ; in the Royal Infirmary, 13 ; in the Workhouse, 10.

35 deaths from zymotic disease have been reported during the past quarter, viz.:—Measles 4, Diarrhœa 28, Scarlet Fever 1, and Enteric Fever 2—equal to an annual zymotic death-rate of 3·66 per 1,000 of population.

During the corresponding quarter of 1896, the deaths from the seven principal zymotic diseases numbered 10, namely, Enteric Fever 3, Diphtheria 1, and Diarrhœa 6—equal to an annual zymotic death-rate of 1·08 per 1,000 of population.

95 cases of infectious disease have been reported to me during the past quarter, namely, Scarlatina 4, Measles 75, and Enteric Fever 16.

During the corresponding quarter of 1896, 13 cases were reported, namely, Enteric Fever 8, Scarlet Fever 3, Puerperal Fever 1, and Diphtheria 1.

Births registered in the Borough during the past quarter were 247—124 males, and 123 females—equal to an annual birth-rate of 25·84 per 1,000 of population.

In the corresponding quarter of 1896, there were 232 births—113 males, and 119 females—equal to an annual birth-rate of 27·32 per 1,000 of population.

I remain,

Mr. Mayor, Mr. Chairman, and Gentlemen,

Your obedient servant,

G. R. PARKER.

November 1st, 1897.

To the Urban Sanitary Authority of the Borough of Lancaster.

Mr. Mayor, Mr. Chairman, and Gentlemen,

I beg to present to you my Report for the quarter ending December 31st, 1897.

Total deaths occurring in the Borough of Lancaster during this quarter, 159, equal to a gross annual death-rate of 16·63 per 1,000 of population.

During the corresponding period of last year the deaths numbered 180, equal to a gross annual death-rate of 19·44 per 1,000 of population.

The deaths in the Borough of Lancaster for the same period (excluding the principal Institutions) number 99, equal to an annual corrected death-rate of 11·20 per 1,000 of population.

During the corresponding quarter of last year these deaths numbered 119, equal to an annual corrected death-rate of 13·93 per 1,000 of population.

Of these 99 deaths, 47 were those of males and 52 were those of females. 38 occurred in children under 5 years of age and 61 in persons over that age.

Deaths in the County Lunatic Asylum, 38; in the Workhouse, 12; in the Royal Infirmary, 8; in Ripley's Hospital, 1; in the Castle, 1; Total, 60.

Deaths from the principal zymotic diseases 10, namely, Enteric Fever, 6; Diarrhœa 3, and Measles 1; equal to an annual zymotic death-rate of 1·04 per 1,000 of population.

During the corresponding period of last year there were 3 such deaths, viz., Enteric Fever 1, Measles 1, and Whooping Cough 1; equal to an annual zymotic death-rate of ·3 per 1,000 of population.

20 cases of infectious diseases have been reported to me during the past quarter, viz. :—

Enteric Fever.....	17
Measles	2
Scarlatina	1
	—
	20

Births registered in the Borough during the last quarter number 217—120 were those of males, and 97 those of females,—equal to an annual birth-rate of 22·70 per 1,000 of population.

In the corresponding quarter of 1896 the births of 256 children were registered—127 were those of males and 129 those of females,—equal to an annual birth-rate of 27·65 per 1,000 of population.

I remain,

Mr. Mayor, Mr. Chairman, and Gentlemen,

Your obedient servant,

G. R. PARKER.

Lancaster, January 31st, 1898.

PORT OF LANCASTER.



ANNUAL REPORT

OF

Medical Officer

OF

HEALTH.

To the Sanitary Authority of the Port of Lancaster.

Mr. MAYOR, Mr. CHAIRMAN, AND GENTLEMEN,

The Marine Population of the Port of Lancaster is estimated to be 63.

Captain Russell has again with his customary kindness supplied me with the statistics for the year.

The total number of trading vessels entering the Port during the year 1897 was 203, representing a total tonnage of 25,152 tons, and total hands about 1,177.

Of these 179 were engaged in the home trade, and 24 in the foreign trade.

Of the 179 home trade vessels entering the Port all were British; the total tonnage was 16,213 tons, having about 850 hands on board.

The following table shows the number of home trade vessels arriving at the Port during the past ten years, with their total tonnage and total hands :—

Year.	No. of Vessels.	Tonnage.	Hands.
1888	191	14324	800
1889	234	23476	1102
1890	246	24208	980
1891	171	16612	684
1892	129	13307	855
1893	128	13727	640
1894	127	19297	605
1895	124	13583	607
1896	174	17334	800
1897	179	16213	850

Of the vessels engaged in the Foreign Trade, ships of British nationality numbered 14, and the remaining 10 were foreign. Their total tonnage was 8,939 tons, with total hands about 327.

The following table shows the number of Foreign Trade vessels entering the Port during the last ten years, with their total tonnage and total hands :—

Year.	No. of Vessels.	Tonnage.	Hands.
1888	28	11557	314
1889	38	13074	338
1890	42	12046	377
1891	36	11094	331
1892	38	11232	380
1893	23	7742	236
1894	16	4894	136
1895	21	6214	228
1896	34	13675	453
1897	24	8939	327

The Sanitary Inspector, Mr. Smith, has made forty-three visits to these vessels. Thirty-one of these vessels were visited at Glasson Dock and the remaining twelve at the Quay, Lancaster.

No nuisances were discovered; everything being in fairly good order. (See Inspector's Report.)

During the year it has been ascertained definitely that the duty of providing a water supply for the ships at Glasson Dock is the duty of the Lancaster Rural Sanitary Authority. Several meetings have taken place for the consideration of the matter, but as yet no provision has been made.

I hope, however, that during the summer a water supply may be provided.

Again I have to record the fact that no case of illness on board these vessels came to my knowledge.

I remain,

Mr. Mayor, Mr. Chairman, and Gentlemen,

Your obedient Servant,

G. R. PARKER,

Medical Officer of Health.

March 10, 1898.
